



### REMARKS

Claims 1-3, 11, 12, 15 and 16 are pending and under examination (claims 4-10, 13 and 14 having been previously canceled).

#### Rejections under 35 U.S.C. § 102

Claims 1-3, 11, 12, 15 and 16 stand rejected under 35 U.S.C. § 102(a) as allegedly anticipated by EP 844 306 ("the '306 patent"). Applicant respectfully traverses this ground for rejection.

Examiner Ponnaluri has stated that the instant claims recite:

' library of vectors, wherein each vector in the library has a member of a first variable polynucleotides encoding a first polypeptide, and a member of a second plurality of variable polynucleotides encoding a second polypeptide', which is interpreted as 'each vector has a first member of the polynucleotides, and a second member of the polynucleotides.' That is each vector has one single first polynucleotide sequence encoding a single first polypeptide, and a second single polynucleotide encoding a single polypeptide (Office Action at page 3, emphasis in original).

Examiner Ponnaluri has characterized the '306 patent as teaching:

that both vH and vL chains [are] cloned into the same vector, in which one of the chain [sic.] is already known to have desired properties is kept fixed' which is interpreted as 'vector comprising first polynucleotides encoding a first polypeptide, and a second polynucleotide encoding a second polypeptide.' (Office Action at page 4, emphasis added).

Examiner Ponnaluri then concluded that "the first member or the second member is considered as variable" and therefore the instant claims are anticipated (Office Action at page 4).

Applicant respectfully submits that Examiner Ponnaluri failed to consider all of the limitations of the instant claims and thus mis-characterized the instant claims. The instant claims are directed to a library made up of a collection of vectors. The individual vectors have common features (*e.g.*, first and second cloning regions, a sequence encoding an anchor region, and a tag) and unique features (*e.g.*, the first and second pluralities of variable polynucleotides). The first and second pluralities of variable polynucleotides each encode a plurality of polypeptides (*i.e.*,

the first plurality of variable polynucleotides encodes a first plurality of polypeptides and the second plurality of variable polynucleotides encodes a second plurality of polypeptides). Both the first and second pluralities are variable, and thus neither the nucleotide sequences nor the polypeptide sequences encoded by them are "fixed". Accordingly, the '306 patent does not anticipate the instant claims. Applicant respectfully requests that this ground for rejection be withdrawn.

Claims 1-3, 11, 12, 15 and 16 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 5,969,108 ("the '108 patent"). Applicant respectfully traverses this ground for rejection.

Applicant notes that the '108 patent and the '306 patent (discussed above) claim priority from the same U.K. patent application and that the disclosures are highly similar. Examiner Ponnaluri has characterized the instant claims and the disclosure of the '108 patent essentially identically as in her rejection of the instant claims over the '306 patent (*see above*). Applicant respectfully submits that the '108 patent fails to anticipate the instant claims for the same reasons that the '306 patent fails to anticipate the instant claims. Accordingly, Applicant respectfully requests that this ground for rejection be withdrawn.

Claims 1-3 and 11-16 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 6,172,197 ("the '197 patent"). Applicant respectfully traverses this ground for rejection.

Applicant notes that the '197 patent, the '108 patent and the '306 patent (discussed above) claim priority from the same U.K. patent application, and that the disclosures are highly similar. Examiner Ponnaluri has characterized the instant claims and the disclosure of the '197 patent essentially identically as in her rejection of the instant claims over the '306 patent and the '108 patent (*see above*). Applicant respectfully submits that the '197 patent fails to anticipate the instant claims for the same reasons that the '306 patent and the '108 patent fail to anticipate

the instant claims. Accordingly, Applicant respectfully requests that this ground for rejection be withdrawn.

Rejections under 35 U.S.C. § 103(a)

Claims 1-3, 11, 12, 15 and 16 stand rejected under 35 U.S.C. § 103(a) are allegedly obvious over U.S. Patent No. 5,969,108 ("the '108 patent) or U.S. Patent No. 6,172,197 ("the '197 patent"). Applicant respectfully traverses this ground for rejection.

Examiner Ponnaluri has characterized the instant claims and the disclosures of the '108 patent and the '197 patent as described above. Examiner Ponnaluri has further stated that:

the reference teaches in each vector one of the chain [*sic.*] is already known to have desired properties, however in [*sic.*] combinatorial library multiple such vectors would read on variable polynucleotide sequences as the instant claims (Office Action at page 9).

Examiner Ponnaluri has further concluded that:

it would have been obvious to one of skill in the art to use the combinatorial approaches taught by the reference to clone different combinations of the first chain and second chain into the vectors, and methods of screening for functional Fab. A person skilled in the art would have been motivated to use the variable first member of polynucleotides and variable second polynucleotides into the same vector, because such vectors will have more diversity and express polyclonal antibodies (Office Action at pages 9-10).

As discussed above, Applicant respectfully submits that Examiner Ponnaluri has failed to appreciate all of the limitations of the claims.

As discussed above, the '108 patent and the '197 patent fail to anticipate the instant claims. Further, the '108 patent and '197 patent fail to suggest the instant claims. Both the '108 patent and the '197 patent teach five approaches: (1) combinatorial libraries in scFv (thus, the H and L chains are not both 5'-flanked by an rbs and signal sequence); (2) combinatorial libraries in which the H and L chains are on separate vectors; (3) combinatorial libraries in which a single H or L chain (on one vector) is combined with a pool of the complementary chains (on another

vector); (4) combinatorial libraries in which one chain (H or L) is fixed and combined with a pool of the complementary chain on the same vector; and (5) the libraries of the first four approaches using chains obtained from B cells. Nothing in either the '108 patent or the '197 patent teaches or suggests libraries with a pool of H chains combined with a pool of L chains (as recited in the instant claims). While Examiner Ponnaluri asserted that one of skill in the art would have been motivated to modify the teachings of the '108 patent and the '197 patent to arrive at the claimed libraries, there is no evidence on the record of any such motivation to modify the teachings of the cited references. Accordingly, Applicant respectfully submits that this ground for rejection is without merit and respectfully requests that it be withdrawn.

Conclusion

At least for the reasons stated above, Applicant respectfully requests the Examiner allow the instant claims and move the application to allowance.

No fee is believed to be due. Please apply any other charges or credits to deposit account 06-1050, referencing Attorney's Docket No. 10280-139001.

Respectfully submitted,

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